Delfield

INSTALLATION & OPERATION MANUAL

Specification Line®

Please read this manual completely before attempting to install or operate this equipment! Notify carrier of damage. Inspect all components immediately. See page 6.

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IMPORTANT WARNING AND SAFETY INFORMATION

WARNING

Read this manual thoroughly before operating, installing, or performing maintenance on the equipment.

FAILURE TO FOLLOW INSTRUCTIONS IN THIS MANUAL CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

UNLESS ALL COVER AND ACCESS PANELS ARE IN PLACE AND PROPERLY SECURED, DO NOT OPERATE THIS EQUIPMENT.

DAMP OR WET HANDS MAY STICK TO COLD SURFACES.

ALLOW HEATED EQUIPMENT TO COOL DOWN BEFORE ATTEMPTING TO CLEAN OR SERVICE.

CAUTION

Observe the following:

- Minimum clearances must be maintained.
- Keep the equipment area free and clear of combustible material.
- Allow adequate clearance for air openings.
- Operate equipment only on the type of electricity indicated on the specification plate.
- Unplug the unit before making any repairs.
- Retain this manual for future reference.

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INTRODUCTION

General

Model numbers starting with the letters “SS” have a stainless steel exterior and interior. Model numbers starting with the letters “SA” have an aluminum interior and a stainless steel exterior. Door gaskets are magnetic and mount to the door, snapping in place and are removable without tools. Keyed door lock is mounted in the door next to the handle.

Doors can be removed from the cabinet without the use of tools. Each door has two edge mount, self-closing, cam lift style hinges.

Model Number

The following chart (see below) describes the model number system used in this manual.

Heating System

Heating system cabinets are designed to maintain temperatures between 120°F and 200°F. Heating elements are helical shaped, with tubular fins. A circulating fan provides uniform airflow in the cabinet. The entire heating system is mounted to the exterior of the cabinet ceiling, outside the food zone. It is assembled as one piece and can be removed as one piece. An adjustable electronic thermostat controls temperature. The system ON/OFF switch is located on the front exterior of the cabinet.

Refrigeration System

All components are mounted to the exterior cabinet ceiling, outside the food zone and are assembled as one-piece and can be removed as one-piece. Environmentally friendly R404A refrigerant is used. The system has the capability of maintaining between 27°F and 44°F in heavy use food service operations. Refrigerant is metered using a highly responsive thermostatic expansion valve. System is controlled using Delfield’s ACT-Advanced Control Technology electronic temperature control, which provides improved pull down times, reducing compressor cycling and longer compressor life with lower energy consumption. Control system uses adaptive defrost to assure evaporator coil is free of ice and operating at optimum efficiency. Evaporator condensate is eliminated using an energy efficient hot gas system.

Freezer Refrigeration System

All components are mounted to the exterior cabinet ceiling, outside the food zone and are assembled as one-piece and can be removed as one-piece. Environmentally friendly R404A refrigerant is used. The system has the capability of maintaining between -5°F and 0°F in heavy use food service operations. Refrigerant is metered using a highly responsive thermostatic expansion valve. Evaporator defrost is automatic using a time initiated, time/temperature terminated system with electric heaters. Evaporator condensate is eliminated using an energy efficient hot gas system.

SERIES	INTERIOR	TEMP	CONFIG	SECTION	SIZE	SYSTEM	DOORS
S= Specification Line	S=Stainless A=Aluminum	R=Refrigerator F=Freezer H=Heated D=Dual Temp C=Convertible T+Thaw W=Wine	None=Reach-in PT=Pass Thru RI=Roll-in RT=Roll Thru FF=Fish Drawers RL=Refrig Left FL=Freezer Left TR=Top Refrig BR=Bottom Refrig TP=Top Refrig PT BP=Bottom Refrig PT RP=Refrig Left PT FP=Freezer Left PT	1=1 Section 2=2 Section 3+3 Section	None=Standard N=Narrow S=Shallow	None=Standard E=Export Voltage W=Water Cooled R=Remote	S=Solid Full SH=Solid Half G=Hinged Glass Full GH=Hinged Glass Half SL=Sliding Glass Full SLH=Sliding Glass Half SLS=Sliding Solid Full SLSH=Sliding Solid Half D=Drawers

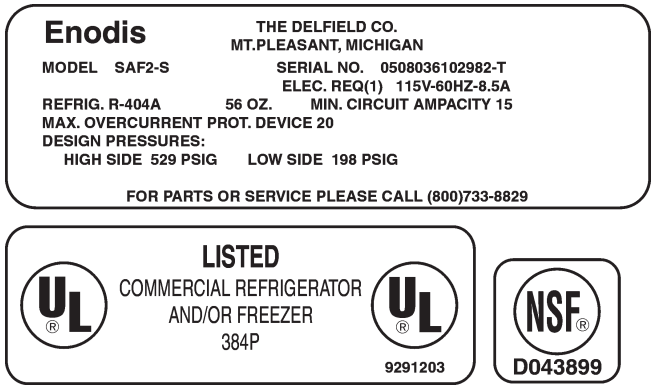
Example: SARRT2-S
Two Section Roll Thru Refrigerator Full Solid Doors

Dual Temperature Refrigeration/Freezer

Each compartment has its own separate refrigeration system. Condensing units are located on top of the cabinet, outside the food zone, behind the removable upper shroud. Evaporator coils are located inside the cabinet mounted to the interior ceiling of each compartment. Defrost is automatic. Condensate travels down a tube in the cabinet sidewall to a receptacle mounted to the exterior bottom of the cabinet where it evaporates with the aid of an electric heater. Each compartment's temperature is individually monitored and controlled. Two exterior digital thermometers monitor temperature. Refrigerator compartment maintains temperature between 33°F and 41°F. Freezer compartment maintains temperature between +5°F and -5°F. Refrigerant is metered using a highly responsive thermostatic expansion valve.

SERIAL NUMBER

Always have the serial number of your unit available when calling for parts or service. The serial number is on the identification plate that also includes the model number. A typical identification plate is shown below. On refrigeration and freezer unit the identification plate is located inside the right most door (the only door on one-door unit), near the top front corner of the right interior wall. On heated units, the identification plate is located in the shroud area on the right side panel. For parts and services go to www.delfield.com.



RECEIVING AND INSPECTING THE EQUIPMENT

Care should be taken during unloading so the equipment is not damaged while being moved into the building.

1. Visually inspect the exterior of the package and skid or container. Any damage should be noted and reported to the delivering carrier immediately.
2. If damaged, open and inspect the contents with the carrier.
3. In the event that the exterior is not damaged, yet upon opening, there is concealed damage to the equipment notify the carrier. Notification should be made verbally as well as in written form.
4. Request an inspection by the shipping company of the damaged equipment. This should be done within 10 days from receipt of the equipment.
5. Also inspect the heating package on heated units and the compressor compartment housing and the refrigeration package on refrigerator and freezer units. Be sure lines are secure and base is still intact.
7. Freight carriers can supply the necessary damage forms upon request.
8. Retain all shipping material until an inspection has been made or waived.

SPECIFICATIONS

HEATED ROLL-THRU

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSHRT1-S, SAHRT1-S	120/208-240	9.0	38.58	N/A	N/A	N/A	N/A	N/A	504	N/A
SSHRT2-S, SAHRT2-S	120/208-240	16	79.74	N/A	N/A	N/A	N/A	N/A	806	N/A
SSHRT3-S, SAHRT3-S	120/208-240	17.8	120.90	N/A	N/A	N/A	N/A	N/A	940	N/A
SSHRT1-GS, SAHRT1-GS	120/208-240	9.0	38.58	N/A	N/A	N/A	N/A	N/A	519	N/A
SSHRT2-GS, SAHRT2-GS	120/208-240	16	79.74	N/A	N/A	N/A	N/A	N/A	836	N/A
SSHRT3-GS, SAHRT3-GS	120/208-240	17.8	120.90	N/A	N/A	N/A	N/A	N/A	985	N/A

SOLID DOOR HOT FOOD CABINET REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSH1-S, SSH1-SH, SAH1I-S, SAH1-SH	120/208-240	9.0	24.96	12.81	3	N/A	N/A	N/A	420	N/A
SSH2-S, SSH2-SH, SAH2-S, SAH2-SH	120/208-240	16.0	51.92	27.54	6	N/A	N/A	N/A	562	N/A
SSH3-S, SSH3-SH, SAH3-S, SAH3-SH	120/208-240	17.8	78.89	42.47	9	N/A	N/A	N/A	782	N/A

SELF CONTAINED SOLID DOOR HEATED ROLL-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSHRL1-S, SAHRL1-S,	120/208-240	9.0	36.15	12.81	N/A	N/A	N/A	N/A	459	N/A
SSHRL2-S, SAHRL2-S,	120/208-240	12.2	74.72	12.81	N/A	N/A	N/A	N/A	704	N/A
SSHRL3-S, SAHRL3-S,	120/208-240	10	113.28	12.81	N/A	N/A	N/A	N/A	1008	N/A

SELF CONTAINED GLASS DOOR HEATED ROLL-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSHRL1-S, SAHRL1-S,	120/208-240	9.0	36.15	N/A	N/A	N/A	N/A	N/A	465	N/A
SSHRL2-S, SAHRL2-S,	120/208-240	16.0	74.72	N/A	N/A	N/A	N/A	N/A	7284	N/A
SSHRL3-S, SAHRL3-S,	120/208-240	17.8	113.28	N/A	N/A	N/A	N/A	N/A	1041	N/A

SOLID DOOR NARROW HOT FOOD CABINET REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSH2N-S SAH2N-S	115/208-240	16	51.92	27.54	6	N/A	N/A	N/A	596	N/A

GLASS DOOR HOT FOOD CABINET REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSH1-G, SSH1-GH, SAH1-G, SAH1-GH,	115/208-240	9.0	24.96	12.81	3	N/A	N/A	N/A	438	N/A
SSH2-G, SSH2-GH, SAH2-G, SAH2-GH	115/208-240	16.0	51.92	27.54	6	N/A	N/A	N/A	569	N/A
SSH3-G, SSH3-GH, SAH3G, SAH3GH	115/208-240	17.8	78.89	42.47	9	N/A	N/A	N/A	812	N/A

SELF CONTAINED SOLID DOOR WINE CABINET REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSW1-S, SSW1-SH, SAW1-S, SAW1-SH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSW1-S, SSW1-SH, SAW1-S, SAW1-SH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSW1-S, SSW1-SH, SAW1-S, SAW1-SH	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED SOLID DOOR READY THAW CABINET REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SST2-S, SST2-SH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P

SELF CONTAINED GLASS DOOR WINE CABINET REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSW1-G, SSW1-GH, SAW1-G, SAW1-GH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSW2-G, SSW2-GH, SAW2-G, SAW2-GH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSW3-G, SSW3-GH, SAW3-G, SAW3-GH	115	8.9	78.89	42.47	9	1/2	1971	3637	830	5-15P

SELF CONTAINED SHALLOW SOLID DOOR REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1S-S, SSR1S-SH, SAR1S-S, SAR1S-SH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSR2S-S, SSR2S-SH, SAR2S-S, SAR2S-SH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSR3S-S, SSR3S-SH, SAR3S-S, SAR3S-SH	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED SHALLOW HINGED GLASS DOOR REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1S-G, SSR1S-GH, SAR1S-G, SAR1S-GH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSR2S-G, SSR2S-GH, SAR2S-G, SAR2S-GH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSR3S-G, SSR3S-GH, SAR3S-G, SAR3S-GH	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED SOLID DOOR ROLL-THRU REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRRT1, SARRT1-S	115	10.3	38.58	N/A	N/A	½	1706	3120	494	5-15P
SSRRT2-S, SARRT2-S	115/208-230	10.1	79.74	N/A	N/A	¾	3263	69.20	736	N/A
SSRRT3-S, SARRT3-S	115/208-230	11.3	120.9	N/A	N/A	¾	4815	7569	1056	N/A

SELF CONTAINED GLASS DOOR ROLL-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRRL1-G, SARRL1-G	115	9.0	36.15	N/A	N/A	1/3	1331	2614	487	5-15P
SSRRL2-G, SARRL2-G	115	12.2	74.72	N/A	N/A	½	2512	4046	798	5-15P
SSRRL3-G, SARRL3-G	115/208-230	10	113.28	N/A	N/A	¾	3687	7569	1152	N/A

SELF CONTAINED HINGED GLASS DOOR PASS-THRU REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRPT1-G, SSRPT1-GH, SARPT1-G, SARPT-GH	115	12.8	26.64	12.81	3	1/3	1537	2614	476	5/20P
SSRPT2-G, SSRPT2-GH, SARPT2-G, SARPT2-GH	115	11.2	55.42	27.54	6	½	3001	4096	740	5-15P
SSRPT3-G, SSRPT3-GH, SARPT3-G, SARPT3-GH	115/208-230	12.4	84.19	42.27	9	¾	4451	7569	1032	14-20P

SELF CONTAINED SOLID DOOR ROLL-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRRL1-S, SARRL1-S	115	9.0	36.15	N/A	N/A	1/3	1207	2354	476	5-15P
SSRRL2-S, SARRL2-S	115	12.2	74.72	N/A	N/A	½	2221	3637	768	5-15P
SSRRL3-S, SARRL3-S	115/208-230	10	113.28	N/A	N/A	¾	3229	6744	1044	N/A

SELF CONTAINED SOLID DOOR REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1-S, SSR1-SH, SAR1-S, SAR1-SH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSR2-S, SSR2-SH, SAR2-S, SAR2-SH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSR3-S, SSR3-SH, SAR3-S, SAR3-SH	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED SHALLOW SOLID DOOR PASS-THRU REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRPT1S, SARPT1S	115	12.8	26.64	12.81	3	1/3	968	2354	455	5-20P
SSRPT12S, SARPT2SS	115	11.2	55.42	27.54	6	½	1843	3637	700	5-15P

SELF CONTAINED NARROW HINGED GLASS DOOR REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1N-G, SSR1N-GH, SAR1N-G, SAR1N-GH	115	8.5	20.97	10.59	3	¼	713	2015	398	5-15P
SSR2N-G, SSR2N-GH, SAR21N-G, SAR21N-GH	115	12.8	43.94	23.10	6	1/3	1285	2522	856	5-20P

SELF CONTAINED SOLID DOOR PASS-THRU REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRPT1, SARPTS	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSRPT2, SARPT2	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSRPT3, SARPT3	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED SOLID DOOR PASS-THRU REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1N-S, SSR1N-SH, SAR1N-S, SAR1N-SH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSR2N-SG, SSR2N-SH, SAR21N-S, SAR21N-SH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P

SELF CONTAINED HINGED GLASS DOOR REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1-G, SSR1-GH, SAR1-G, SAR1-GH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSR2-G, SSR2-GH, SAR2-G, SAR2-GH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSR3-G, SSR3-GH, SAR3-G, SAR3-GH	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED SOLID DOOR ROLL-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1-S, SSR1-SH, SAR1-S, SAR1-SH	115	8.5	24.96	12.81	3	¼	758	2015	418	5-15P
SSR2-S, SSR2-SH, SAR2-S, SAR2-SH	115	12.8	51.92	27.54	6	1/3	1374	2522	650	5-20P
SSR3-S, SSR3-SH, SAR3-S, SAR3-SH	115	8.9	78.89	42.47	9	½	1971	3637	830	5-15P

SELF CONTAINED FISH DRAWER REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSRFF1	115	8.5	24.96	N/A	N/A	¼	758	2015	418	5-15P
SSRFF2	115	12.8	51.92	N/A	N/A	1/3	1374	2522	650	5-20P

SELF CONTAINED SLIDING DOOR SHALLOW REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR2S-SL, SAR2S-SL	115	11.2	51.92	27.54	6	1/3	1853	2801	670	5-15P

SELF CONTAINED SLIDING DOOR REACH-IN REFRIGERATOR

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR2-SL, SAR2-SL	115	11.2	51.92	27.54	6	1/3	1853	2801	670	5-15P

SELF CONTAINED SHALLOW SOLID DOOR REACH-IN FREEZER

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSF1S-S, SSF1S-SH, SAF1S-S, SAF1S-SH	115	11.4	18.25	8.98	3	½	1102	16.29	406	5-15P
SSF2S-S, SSF2S-SH, SAF2S-S, SAF2S-SH	115	16	37.96	19.04	6	¾	2064	3326	676	5-20P
SSF3S-S, SSF3S-SH, SAF3S-S, SAF3S-SH	115	11.4	57.67	29.10	9	1	2995	4253	909	14-20P

SELF CONTAINED SOLID DOOR ROLL-IN FREEZER

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSFRL1-S, SAFRL1-S	115	13.7	36.15	N/A	N/A	½	1516	2094	497	5-20P
SSFRL1-S, SAFRL1-S	115/208-230	9.3	74.72	N/A	N/A	1	2714	3494	824	N/A
SSFRL1-S, SAFRL1-S	115/208-230	11.8	113.28	N/A	N/A	1 ½	3901	5394	1128	N/A

SELF CONTAINED SOLID DOOR NARROW REACH-IN FREEZER

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSF1N-S, SSF1N-SH, SAF1N-S, SAF1N-SH	115	11.4	20.97	10.59	3	½	1166	1629	408	5-15P
SSF2N-SG, SSF2N-SH, SAF21N-S, SAFR21N-SH	115	16	43.94	23.10	6	¾	2101	3326	680	5-20P

SELF CONTAINED SOLID DOOR TWO SECTION DUAL TEMP REFRIGERATOR/FREEZER PASS-THRU

MODEL NUMBER	DESCRIPTION	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WEIGHT	NEMA PLUG
SSDRLPT2, SADRLPT2	LEFT DR REF RIGHT DR FRZ	115 115	8.5 11.4	24.96 24.96	12.81 12.81	3 3	¼ ½	758 1239	2015 1868	730 730	5-15P 5-15P
SSDFLPT2, SADFLPT2	LEFT DR FRZ RIGHT DR REF	115 115	11.4 8.5	24.96 24.96	12.81 12.81	6 6	½ ¼	1239 758	1868 2015	730 730	5-15P 5-15P

GLASS DOOR SINGLE SECTION DUAL TEMP REFRIGERATOR/FREEZER REACH-INS

MODEL NUMBER SSDTR1-GH/ SADTR1-GH	VOLTAGE	AMPS	STORAGE CU. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WEIGHT	NEMA PLUG
Refrigerator	115/60/1	14 TOTAL	12.19	2	1/5	550	1725	545 LBS. TOTAL	5-20P
Freezer	115/60/1		12.19	2	1/3	910	1380		
SSDBR1-GH/ SADBR1-GH									
Freezer	115/60/1	14 TOTAL	12.19	2	1/3	910	1380	545 LBS. TOTAL	5-20P
Refrigerator	115/60/1		12.19	2	1/5	550	1725		

SOLID DOOR SINGLE SECTION DUAL TEMP REFRIGERATOR/FREEZER PASS-THRU UNITS

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WEIGHT	NEMA PLUG
SSDTPT1-SH/ SADTPT1-SH									
Refrigerator	115/60/1	14 TOTAL	12.19	2	1/5	563	1543	545 LBS. TOTAL	5-20P
Freezer	115/60/1		12.19	2	1/3	921	1260		
SSDBT1-SH/ SADPT1-SH									
Freezer	115/60/1	14 TOTAL	12.19	2	1/3	921	1260	545 LBS. TOTAL	5-20P
Refrigerator	115/60/1		12.19	2	1/5	563	1543		

SELF CONTAINED SOLID DOOR PASS-THRU FREEZER

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSFPT1, SAFPT1	115	13.7	26.64	12.81	3	½	1583	2467	672	5-20P
SSFPT2, SAFPT2	115/208-230	7.0	55.42	27.54	6	1	3013	3497	1001	14-20P
SSFPT3, SAFPT3	115/208-230	10.0	84.19	42.27	9	1 ½	4412	5185	1268	14-20P

SELF CONTAINED SOLID DOOR TWO SECTION DUAL TEMP REFRIGERATOR/FREEZER REACH-INS

MODEL NUMBER	DESCRIPTION	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WEIGHT	NEMA PLUG
SSDRL1, SADRL1	LEFT DR REF	115	8.5	24.96	12.81	3	¼	758	2015	730	5-15P
	RIGHT DR FRZ	115	11.4	24.96	12.81	3	½	1239	1868	730	5-15P
SSDFL2, SADFL2	LEFT DR FRZ	115	11.4	24.96	12.81	6	½	1239	1868	730	5-15P
	RIGHT DR REF	115	8.5	24.96	12.81	6	¼	758	2015	730	5-15P

SOLID DOOR SINGLE SECTION DUAL TEMP REFRIGERATOR/FREEZER REACH-INS

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WEIGHT	NEMA PLUG
SDTR1-SH/ SADTR1-SH									
Refrigerator	115/60/1	14 TOTAL	11.52	2	1/5	455	1543	545 LBS. TOTAL	5-20P
Freezer	115/60/1		11.52	2	1/3	744	1260		
SDBR1-SH/ SADBR1-SH									
Freezer	115/60/1	14 TOTAL	11.52	2	1/3	744	1260	545 LBS. TOTAL	5-20P
Refrigerator	115/60/1		11.52	2	1/5	455	1543		

SELF CONTAINED HINGED GLASS DOOR REACH-IN FREEZER

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSF1-G, SSF1-GH, SAF1-G, SAF1-GH	115	13.7	24.96	12.81	3	½	1605	2300	450	5-20P
SSF2-G, SSF2-GH, SAF2-G, SAF2-GH	115	9.3	51.92	27.54	6	1	3009	3843	730	14-20P
SSF3-G, SSF3-GH, SAF3-G, SAF31-GH	115	10.0	78.89	42.47	9	1 ½	4386	5940	990	14-20P

SELF CONTAINED SOLID DOOR REACH-IN FREEZER

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSF1-S, SSF1-SH, SAF1-S, SAF1-SH	115	11.4	24.96	12.81	3	½	1239	1868	440	5-15P
SSF2-S, SSF2-SH, SAF2-S, SAF2-SH	115	16	51.92	27.54	6	¾	2247	3326	710	5-20P
SSF3-S, SSF3-SH, SAF3-S, SAF31-SH	115/208-230	11.4	78.89	42.47	9	1	3222	4136	960	14-20P

SELF CONTAINED SOLID DOOR CONVERT-A-TEMP REACH-IN

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	SHELVES SQ. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WGT	NEMA PLUG
SSR1-S, SAR1-S	115	11.4	24.96	12.81	3	½	1239	1868	440	5-15P
SSR2-S, SAR2-S	115	16	51.92	27.54	6	¾	2247	3326	710	5-20P

GLASS DOOR SINGLE SECTION DUAL TEMP REFRIGERATOR/FREEZER PASS-THRU UNITS

MODEL NUMBER	VOLTAGE	AMPS	STORAGE CU. FT.	NO. OF SHELVES	UNIT H.P.	BTU/HR CAB LOAD	BTU/HR SYSTEM CAP	SHIP WEIGHT	NEMA PLUG
SSDTPT1-GH/ SADTPT1-GH									
Refrigerator	115/60/1	14 TOTAL	12.19	2	1/5	830	1725	545 LBS. TOTAL	5-20P
Freezer	115/60/1		12.19	2	1/3	1329	1380		
SSDBPT1-GH/ SADBPT1-GH									
Freezer	115/60/1	14 TOTAL	12.19	2	1/3	1329	1380	545 LBS. TOTAL	5-20P
Refrigerator	115/60/1		12.19	2	1/5	830	1725		

INSTALLATION

REACH-INS AND PASS-THRUS

Location

Cabinets represented in this manual are intended for indoor use only. Be sure the location chosen has a floor strong enough to support the total weight of the cabinet, 1000 lbs. per door section. Reinforce the floor if necessary to provide for maximum loading. For the most efficient operation, be sure to provide good air circulation inside and out. The location should be selected so that the power cord can be connected without any extensions.

Inside Unit

Take care not to block airflow to the fans or heating elements and allow space along the front, back and sides.

Outside Unit

Be sure that the unit has access to ample air; avoid hot corners and locations near stoves and ovens. Provide a minimum clearance of 12" (30.5 cm) above the unit that is open to the front.

Leg and Caster Installation

WARNING:

Some cabinets may weigh over 1000 lbs (450 kg). Use a lifting device capable of supporting the unit when removing skid or installing legs or casters.

To install the legs, refer to Figure 1 and proceed as follows:

1. Remove unit from skid.
2. Raise unit to access leg/caster mounting holes on bottom of unit.
3. Attach the legs with the four hex head bolts.

To install the casters, refer to Figure 1 and proceed as follows:

1. Remove unit from skid.
2. Raise unit to access leg/caster mounting holes on bottom of unit.
3. Attach the casters with the four hex head bolts.

Utility Base

WARNING:

Some cabinets may weigh over 1000 lbs (450 kg). Use a lifting device capable of supporting the unit when removing skid or installing legs or casters.

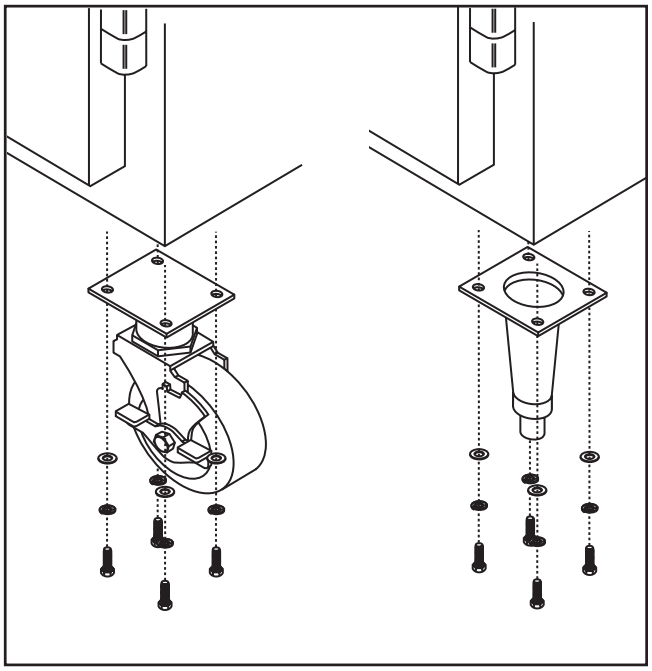


Figure 1. Leg or Caster Installation

To install the utility base, refer to Figure 2 and proceed as follows:

1. Remove unit from skid.
2. Raise unit to access leg/caster mounting holes on bottom of unit.
3. Attach the utility base to bottom of cabinet using the leg/caster mounting screws.

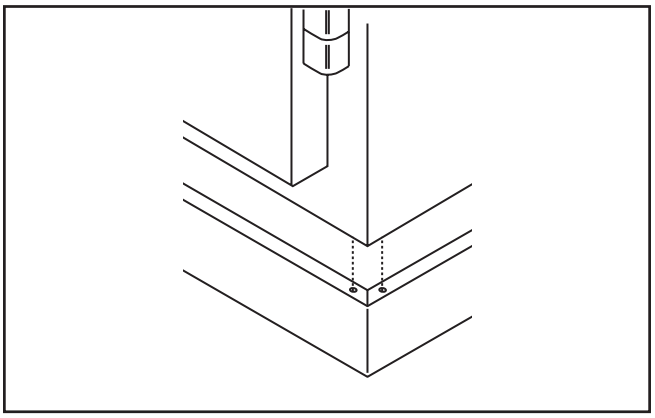


Figure 2. Utility Base Installation

Leveling

After the cabinet has been placed in the desired location, cabinets with legs must be leveled. Level units from front to back and from side to side. Leveling will insure proper door operation and removal of condensate. Cabinets with casters must have the caster brake set so the cabinet cannot move.

Stabilizing

It is very important that all legs are properly adjusted to keep the cabinet level, evenly distribute the weight and to make sure the unit will not rock, lean or be unstable.

Electrical Connection

DANGER

Refer to the amperage data list in the SPECIFICATIONS or the serial tag data and your local code or the National Electrical Code to be sure the unit is connected to the proper power source. A protected circuit of the correct voltage and amperage must be run for connection of the supply cord or permanent connection to the unit. The power must be turned off and disconnected whenever performing maintenance or repair functions.

CAUTION

Permanently connected units must be connected in accordance with NEC Article 422 Appliances, C-Disconnecting means. It is the responsibility of the end user to provide the disconnect means to satisfy the authority having jurisdiction.

The power cords supplied with this equipment are three-pronged plugs and must be connected to a three-pronged wall outlet for proper grounding. Do not use an adapter to connect to a two-pronged outlet. The three pronged-outlet provides a ground connection which must be used to prevent a shock hazard.

CAUTION

Have the wall outlet checked by a qualified electrician to be sure a proper ground is present and that the outlet provides the correct voltage and required amperage to match the rating plate.

Any power cord that is frayed or damaged should be replaced. When disconnecting the unit from the power source, do not pull on the wire. Firmly grip the plug and remove from outlet.

The plugs shown in Figure 3 are used on the various models.

ROLL-INS AND ROLL-THRU MODELS

Location

Cabinets represented in this manual are intended for indoor use only. Be sure the location chosen has a floor strong enough to support the total weight of the cabinet. Allow for a total load of approximately 1000 pounds (450 kg) per door section. Reinforce the floor if necessary

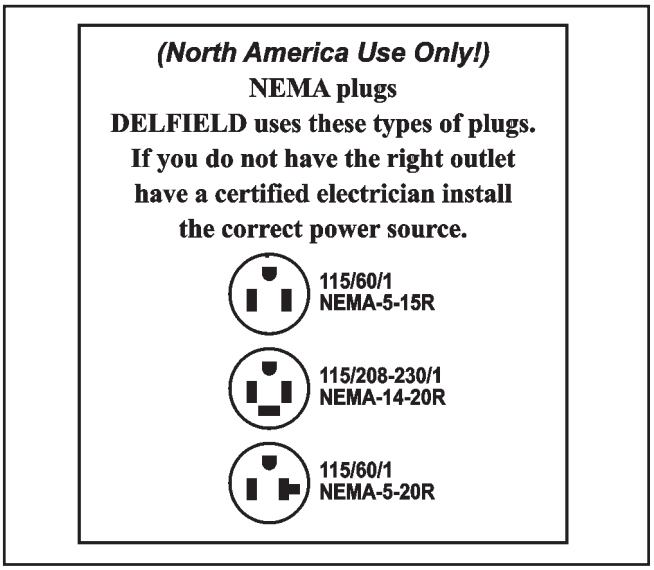


Figure 3. Plug Configurations

to provide for maximum loading. For the most efficient operation, be sure to provide good air circulation inside and out. The location should be selected so that the power cord can be connected without any extensions.

Inside Cabinet

Take care not to block airflow to the fans or heating elements and allow space along the front, back and sides.

Outside Cabinet

Be sure that the unit has access to ample air; avoid hot corners and locations near stoves and ovens. Provide a minimum clearance of 12" (30.5 cm) above the unit that is open to the front.

Door Removal

If the doors need to be removed during installation, proceed as follows:

1. Remove top hinge cover from hinge as shown in Figure 4.
2. Remove door from unit by lifting door up a few inches and pulling away from unit.

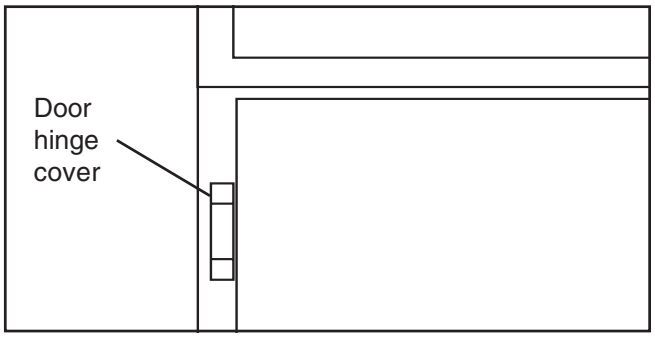


Figure 4. Door Hinge Cover

Leveling

After the cabinet has been placed in the desired location, cabinets with legs must be leveled. Level units from front to back and from side to side. Leveling will insure proper door operation and removal of condensate. Cabinets with casters must have the caster brake set so the cabinet cannot move.

Stabilizing

It is very important that all legs are properly adjusted to keep the unit level, to evenly distribute the weight and to make sure the unit will not rock, lean or be unstable.

Electrical Connection

DANGER

Refer to the amperage data list in the SPECIFICATIONS or the serial tag data and your local code or the National Electrical Code to be sure the unit is connected to the proper power source. A protected circuit of the correct voltage and amperage must be run for connection of the supply cord or permanent connection to the unit. The power must be turned off and disconnected whenever performing maintenance or repair functions.

CAUTION

Permanently connected units must be connected in accordance with NEC Article 422 Appliances, C-Disconnecting means. It is the responsibility of the end user to provide the disconnect means to satisfy the authority having jurisdiction.

The power cords supplied with this equipment are three-pronged plugs and must be connected to a three-pronged wall outlet for proper grounding. Do not use an adapter to connect to a two-pronged outlet. The three pronged-outlet provides a ground connectio0n which must be used to prevent a shock hazard.

CAUTION

Have the wall outlet check by a qualified electrician to be sure a proper ground is present and that the outlet provides the correct voltage and required amperage to match the rating plate.

Any power cord that is frayed or damaged should be replaced. When disconnecting the unit from the power source, do not pull on the wire. Firmly grip the plug and remove from outlet.

The plugs shown in Figure 5 are used on the various models.

OPERATION

HEATED CABINETS

The Heated units have a POWER ON/OFF switch located behind the flip up shroud at the front top of the unit for controlling power to the unit and an electronic thermostat for setting the temperature. A circulating fan provides uniform airflow in the cabinet. Refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Raise the shroud to access the controls.
3. Set the Main POWER ON/OFF switch, to the ON position.
4. Adjust the electronic thermostat to the desired temperature.
5. Allow unit to warm-up before use.

DANGER

The unit surface is very hot! Avoid direct contact with skin; use appropriate protective apparel, such as gloves.

6. Turn the unit off by setting the POWER ON/OFF switch to the OFF position
7. After use, allow unit to cool down.
8. Clean equipment as discussed in the MAINTENANCE section of this manual.

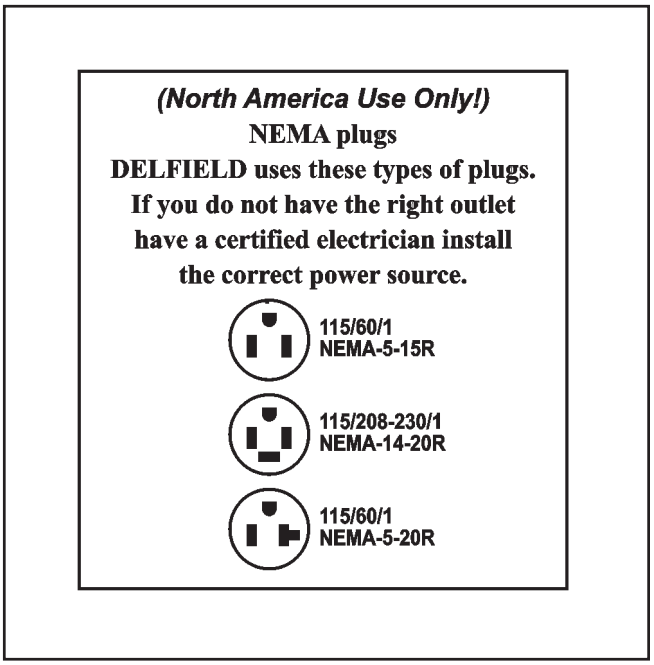


Figure 5. Plug Configurations

Operating Controls

REFRIGERATED WINE CABINETS

Refrigerated wine cabinet units have a POWER ON/OFF switch located on the front of the unit for controlling power to the unit and a Delfield's ACT-Advanced Control Technology electronic temperature control for setting the temperature. The temperature control holds the temperature between 50°F and 60°F and provides improved pull down times, reducing compressor cycling and longer compressor life with low energy consumption. Refrigerant is metered using a highly responsive thermostatic expansion valve. The control system uses adaptive defrost to assure evaporator coil is free of ice and operating at optimum efficiency. Evaporator condensate is eliminated using an energy efficient hot gas system. An exterior digital thermostat monitors cabinet temperature. To operate the refrigerated wine cabinet unit, refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Raise the shroud to access the controls.
3. Set the main POWER ON/OFF switch to the ON position.
4. Adjust the electronic temperature control to the desired temperature.
5. Turn the unit off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

REFRIGERATED THAW CABINETS

Refrigerated thaw cabinet units have a POWER ON/OFF switch located on the front of the unit for controlling power to the unit and a Delfield's ACT-Advanced Control Technology electronic temperature control for setting the temperature. The temperature control holds the temperature between 27°F and 44°F and provides improved pull down times, reducing compressor cycling and longer compressor life with low energy consumption. Refrigerant is metered using a highly responsive thermostatic expansion valve. The control system uses adaptive defrost to assure evaporator coil is free of ice and operating at optimum efficiency. Evaporator condensate is eliminated using an energy efficient hot gas system. An exterior digital thermostat monitors cabinet temperature. Thawing is aided by mullion mounted heater and fan system. To operate the refrigerated thaw cabinet unit, refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Raise the shroud to access the controls.
3. Set the main POWER ON/OFF switch, to the ON position
4. Adjust the electronic temperature control to the desired temperature.
5. Turn the unit off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

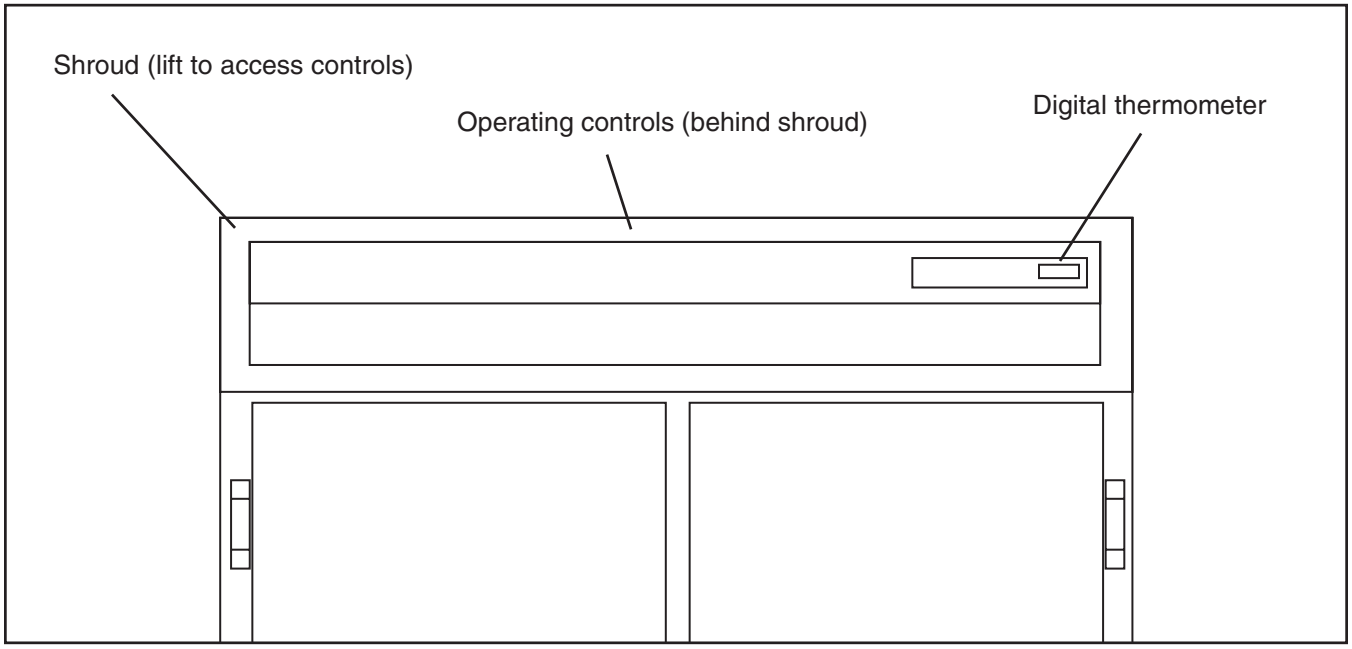


Figure 6. Operating Controls and Indicator Location

REFRIGERATED CABINETS

Refrigerated cabinet units have a POWER ON/OFF switch located on the front of the unit for controlling power to the unit and a Delfield's ACT-Advanced Control Technology electronic temperature control for setting the temperature. The temperature control holds the temperature between 27°F and 44°F and provides improved pull down times, reducing compressor cycling and longer compressor life with low energy consumption. Refrigerant is metered using a highly responsive thermostatic expansion valve. The control system uses adaptive defrost to assure evaporator coil is free of ice and operating at optimum efficiency. Evaporator condensate is eliminated using an energy efficient hot gas system. An exterior digital thermostat monitors cabinet temperature. To operate the refrigerated cabinet unit, refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that cabinet is properly connected to the power source.
2. Raise the shroud to access the controls.
3. Set the main POWER ON/OFF switch, to the ON position.
4. Adjust the electronic temperature control to the desired temperature.
5. Turn the unit off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

FREEZER CABINETS

Freezer cabinet units have a POWER ON/OFF switch located on the front of the unit for controlling power to the unit. Refrigerant is metered using a highly responsive thermostatic expansion valve. The thermostatic expansion valve holds the temperature between -5°F and 0°F. Refrigerant is metered using a highly responsive thermostatic expansion valve. Evaporator defrost is automatic using a time initiated, time/temperature terminated system with electric heaters. Evaporator condensate is eliminated using an energy efficient hot gas system. An exterior digital thermometer monitors cabinet temperature. To operate the Freezer cabinet unit, refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Raise the shroud to access the controls.
3. Set the main POWER ON/OFF switch, to the ON position.
4. Adjust the time/temperature control to the desired temperature and time.
5. Turn the cabinet off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

REFRIGERATOR/FREEZER CABINET

These units combine both a refrigerator compartment and a freezer compartment in the same cabinet. Each compartment has its own separate refrigeration unit. A master POWER ON/OFF switch controls power to both compartments.

Refrigeration Compartment

The refrigeration compartment uses a Delfield's ACT-Advanced Control Technology electronic temperature control for setting the temperature. The temperature control holds the temperature between 27°F and 44°F and provides improved pull down times, reducing compressor cycling and longer compressor life with low energy consumption. Refrigerant is metered using a highly responsive thermostatic expansion valve. An exterior digital thermostat monitors cabinet temperature. To operate the refrigerator compartment, Refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Raise the shroud to access the controls.
3. Set the main POWER ON/OFF switch, to the ON position.
4. Adjust the electronic temperature control to the desired temperature.
5. Turn the unit off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

Freezer Compartment

Refrigerant is metered using a highly responsive thermostatic expansion valve. The thermostatic expansion valve holds the temperature between -5°F and 0°F. Evaporator defrost is automatic using a time initiated, time/temperature terminated system with electric heaters. Evaporator condensate is eliminated using an energy efficient hot gas system. An exterior digital thermometer monitors cabinet temperature. To operate the Freezer compartment, refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Set the main POWER ON/OFF switch, to the ON position.

3. Adjust the time/temperature control for the freezer to the desired temperature and time settings.
4. Set the temperature control for the desired temperature
5. Turn the unit off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

CONVERT-A-TEMP

This unit can be used as either a refrigerator or a freezer. A key switch located behind the hinged upper shroud performs conversion. A master POWER ON/OFF switch controls power to the unit.

In the refrigeration mode the temperature is held between 27°F and 44°F. In the freezer mode the temperature is held between -5°F and 0°F. Refrigerant is metered using a highly responsive thermostatic expansion valve. Evaporator defrost is automatic off cycle in refrigeration mode and a time initiated, time/temperature terminated system with electric heaters in the freezer mode. Evaporator condensate is eliminated using an energy efficient hot gas system. An exterior digital thermometer monitors cabinet temperature. To operate the Convert-A-Temp cabinet, refer to Figure 6 for location of operating controls and proceed as follows:

1. Check that unit is properly connected to the power source.
2. Set the main POWER ON/OFF switch, to the ON position.
3. Using the key switch select either the refrigerator or freezer mode.
4. Adjust the electronic temperature control to the desired temperature.
5. Turn the unit off by placing the POWER ON/OFF switch in the OFF position.
6. Clean equipment as discussed in the maintenance section of this manual.

MAINTENANCE

Stainless Steel Care and Cleaning

To prevent discoloration of rust on stainless steel several important steps need to be taken. First, we need to understand the properties of stainless steel. Stainless steel contains 70-80% iron which will rust. It also contains 12-30% chromium, which forms an invisible passive film over the steels surface, which acts as a shield against corrosion. As long as the protective layer is intact, the metal will not corrode. If the film is broken or contaminated, outside elements can begin to breakdown the steel and begin to form rust or discoloration.

Proper cleaning of stainless steel requires soft cloths or plastic scouring pads.

CAUTION

Never use steel pads, wire brushes or scrapers!

Cleaning solutions need to be alkaline based or non-chloride cleaners. Any cleaner containing chlorides will damage the protective film of the stainless steel. Chlorides are also commonly found in hard water, salts and household and industrial cleaners. If cleaners containing chlorides are used, be sure to rinse repeatedly and dry thoroughly upon completion.

Routine cleaning of stainless steel can be done with soap and water. Extreme stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. It is always good to rub with the grain of the steel. There are also stainless steel cleaners available which can restore and preserve the finish of the steels protective layer.

Early signs of stainless steel breakdown can consist of small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in attempt to restore the passivity of the steel.

Never use an acid based cleaning solution! Many food products have an acidic content which can deteriorate the finish. Be sure to clean ALL food products from any stainless steel surface. Common items include tomatoes, peppers and other vegetables.

DANGER

The power must be turned off and disconnected whenever performing maintenance or repair functions.

Cleaning the Condenser Coil

The condenser coil requires regular cleaning, recommended is every 90 days. In some instances though you may find that there is a large amount of debris and dust or grease accumulated prior to the 90-day time frame. In these cases the condenser coil should be cleaned every 30 days.

If the build up on the coil consists of only light dust and debris the condenser coil can be cleaned with a simple brush. Heavier dust build up may require a vacuum or even compressed air to blow through the condenser coil.

If heavy grease is present there are de-greasing agents available for refrigeration use and specifically for the condenser coils. The condenser coil may require a spray with the de-greasing agent and then blown through with compressed air. Coil should be rinsed thoroughly after a degreasing agent is used.

Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with dirty or clogged condenser coils can result in compressor failures. Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor or cost to replace the compressor.

CAUTION

Never use a high-pressure water wash for this cleaning procedure as water can damage the electrical components located near or at the condenser coil.

Heated Storage Cabinets

The heater ducts on heated cabinets are removable for cleaning. When the ducts are sufficiently cool, remove the thumbscrews and pull the ducts away from the top of the cabinet. Reverse this procedure to re-install the ducts.

CAUTION

Never operate a heated cabinet without all heater ducts in place!

CAUTION

The interior of heated storage cabinets will be hot for some time after the power is turned off. Avoid touching the interior walls and heater ducts with bare hands or arms until you are certain the unit has cooled. The use of gloves is recommended.

PREVENTIVE MAINTENANCE

Gasket Maintenance

Gaskets require regular cleaning to prevent mold and mildew build up and also to keep the elasticity of the gasket. Gasket cleaning can be done with the use of warm soapy water. Avoid full strength cleaning products on gaskets as this can cause them to become brittle and prevent proper seals. Also, never use sharp tools or knives to scrape or clean the gasket which could possibly tear the gasket and rip the bellows.

Gaskets can easily be removed and do not require the use of tools or authorized service persons. The gaskets are "Dart" style and can be pulled out of the groove in the door and gasket can be "pressed" back into place.

Doors/Hinges

Over time and with heavy use the doors hinges may become loose. If it is noticed that the door is beginning to sag, it may become necessary to tighten the screws that mount the hinge brackets to the frame of the unit. If the doors are loose or sagging this can cause the hinge to pull out of the frame which may damage both the doors and the door hinges. In some cases this can require qualified service agents or maintenance personnel.

ERC CONTROL (OPTIONAL)

The ERC-2 Electronic Refrigeration Control is a microprocessor-based electronic controller designed to control both the temperature and the defrost functions of a commercial refrigeration unit. Designed for 115 or 208/240 VAC (50 or 60 Hz), the control comes with four relay outputs: compressor, defrost, evaporator fan and alarm.

The ERC-2 includes a digital display module that provides readout of the temperature, time and built-in diagnostics. The display module can be mounted locally or remotely from the unit and it contains a touch keypad for simple programming. For defrost control, it uses a real time clock.

Applications:

This control is NSF certified and it can be applied to many different commercial refrigeration applications like reach-ins, walk-ins, refrigerated cases, or other products where accurate control of refrigerated space and defrost cycles is required.

Technical Specifications

Input Power:	115/208-240 VAC 50/60Hz (+ or -10%)
Zone and Evaporator Temperature Sensor:	NTC thermistor: Range -40°F to 199°F
Output Relay Ratings:	
Compressor:	1 hp at 115V
Defrost:	16A resistive at 115/208-240V
	Pilot duty 470 VA @ 120/208-240V
Evaporator fan:	1/2 hp at 120V, 3/4 hp at 208V, 1 hp at 240V
Alarm:	5A resistive at 115/208V
Ambient Operating Conditions:	-40°F to 122°F; 0 to 95% RH
Agency Certifications:	UL, CSA, NSF

Special Features

The default parameters for Delfield will be pre-programmed.

In case of a power failure, the control has a safe operating mode in case of sensor failure.

Programming

Accessing

Level 1: Press and hold the SET button for 5 seconds.

Programming

Three buttons are used for the programming: SET, UP and DOWN buttons. See Figure 7.

NOTE: By lifting the gray plastic cover, buttons will be exposed.

1. Scroll through the parameters using the UP and DOWN arrow keys.
2. Choose the parameter to be changed by pressing SET.
3. Scrolling through the options or set the time or temperature by using the UP and DOWN arrow keys.
4. Once you choose the option or adjust the time or temperature, press SET to accept the option.

The ERC-2 control initially powers up displaying 12AM, otherwise it will show the last configured selection (time or temperature). If a power outage occurs during normal operation, the control will maintain the correct time of day using a capacitor (batteries are not required). The time will be maintained for up to 100 hours when the capacitor is fully charged.

To initiate a Manual Defrost, press and hold the MAN DEF key for 3 seconds.There are two levels of programming in the ERC-2. The first of security will enable the user to set two parameters: Time-of-day (CLoC and setpoint temperature SET). The other level allows access to the other parameters.

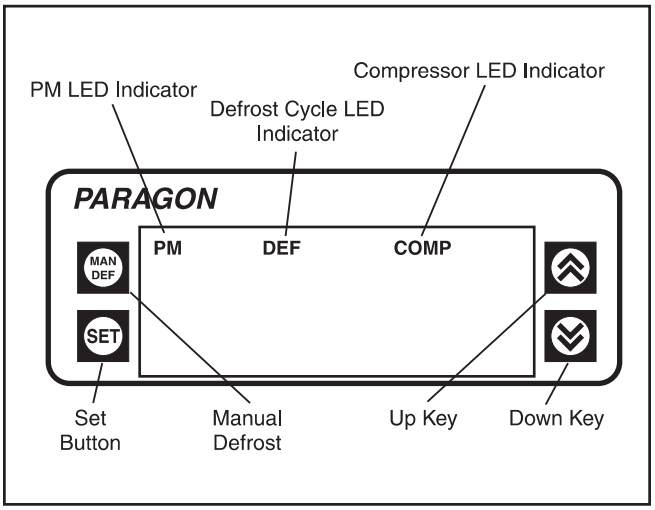


Figure 7. ERC Control Panel

For more information on the ERC Control, please log onto our web site at www.delfield.com and go to the parts and service section, then to the service department page.

STEP 1	SET	Press and hold SET for 5 seconds. The display will show CLoC
STEP 2	SET	Press SET again to change the time of day.
STEP 3	UP OR DOWN	Press UP or DOWN until the correct time of day is displayed.
STEP 4	SET	Press SET to accept the new time.
STEP 5	DOWN	Press DOWN to go to the next parameter. - Set point temperature - SEt (cut out).
STEP 6	SET	Press SET to change the set point temperature.
STEP 7	UP OR DOWN	Press UP or DOWN to go to the desired setpoint. The range is -40°F (-40°C) to 60°F (16°C.).
STEP 8	SET	Press SET to accept the change.
STEP 9	DOWN	Press DOWN to exit the first level of programming.

NOTE: During programming, if no button is pushed during a 30 seconds interval, the control will go back to the normal operating mode. This is valid for both programming levels.

NOTE: When changing the time, press and hold the MAN DEF button for 3 seconds to change the AM/PM mode.

TIMER CONTROL

Two and three section

Freezer Defrost Control

All two and three door freezers are equipped with a Paragon Timer defrost control, Figure 8, for automatic defrosting of the evaporator coil.

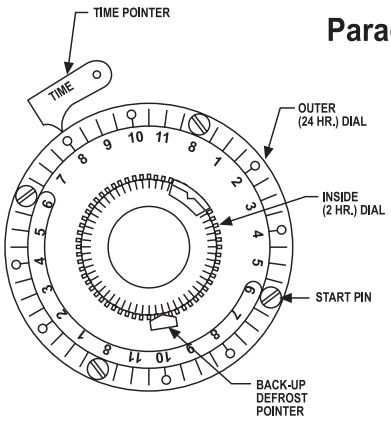
Setting Time of Day

Grasp the knob of the Paragon time clock dial in the center of the inner (2 hour) dial and rotate it in a counter-clockwise direction. This will revolve the outer dial. Continue turning until the correct time of day on the outer dial lines up with the time pointer. This operation requires an initial start-up and any time thereafter when there is an interruption of power to the freezer.

Operation

The Paragon 8145 timer is preset at the factory to provide four defrosts per day at six-hour intervals starting at 6:00 am. If it is necessary to change the number of defrosts due to unusual operating conditions it can be accomplished by placing the pins in the outer dial at the appropriate time of the day that defrost initiation is desired.

Even under the most severe operating conditions it should not be necessary to set the back-up time greater than 60 minutes. Consult the factory if complete de-icing of the coil is not accomplished within this time period.



Paragon 8145

NOTE: The time clock dial is accessible by removing the larger plate of the electrical box located behind the removable louver.

DANGER

Removing of the top panel or timer cover may expose live electrical parts. Disconnect power supply before servicing.

Figure 8. Timer

SINGLE SECTION TIMER PROGRAMMING GUIDE

NOTE: This timer is only used on one-door dual temperature, two-door dual temperature, and one-door freezers models

Programming the timer, Figure 10, is accomplished using two 4-position dipswitches. One switch sets the Defrost time and the other switch sets the cycle time.

Defrost Time

Dip Switch Settings				Minutes
Off	Of	Off	Off	Void
On	Off	Off	Off	5
Off	On	Off	Off	10
On	On	Off	Off	15
On	On	Off	On	20
On	Off	On	Off	25
Off	On	On	Off	30
On	On	On	Off	35
Off	Off	Off	On	40
On	Off	Off	On	45
Off	On	Off	On	50
On	On	Off	On	55
Off	Off	On	On	60

Cycle Time

Dip Switch Settings				Hours
Off	Of	Off	Off	Void
On	Off	Off	Off	2
Off	On	Off	Off	4
On	On	Off	Off	6
On	On	Off	On	8
On	Off	On	Off	10
Off	On	On	Off	12
On	On	On	Off	14
Off	Off	Off	On	16
On	Off	Off	On	18
Off	On	Off	On	20
On	On	Off	On	22
Off	Off	On	On	24

NOTE: Factory settings are highlighted

Figure 9. Defrost and Cycle Time Charts

Operation

The electric defrost controller is preset at the factory to provide a defrost cycle every 6 hours (4 defrost per day). If it is necessary to change the number of defrosts due to unusual conditions, it can be accomplished by adjusting the Cycle time switches, see Figure 9.

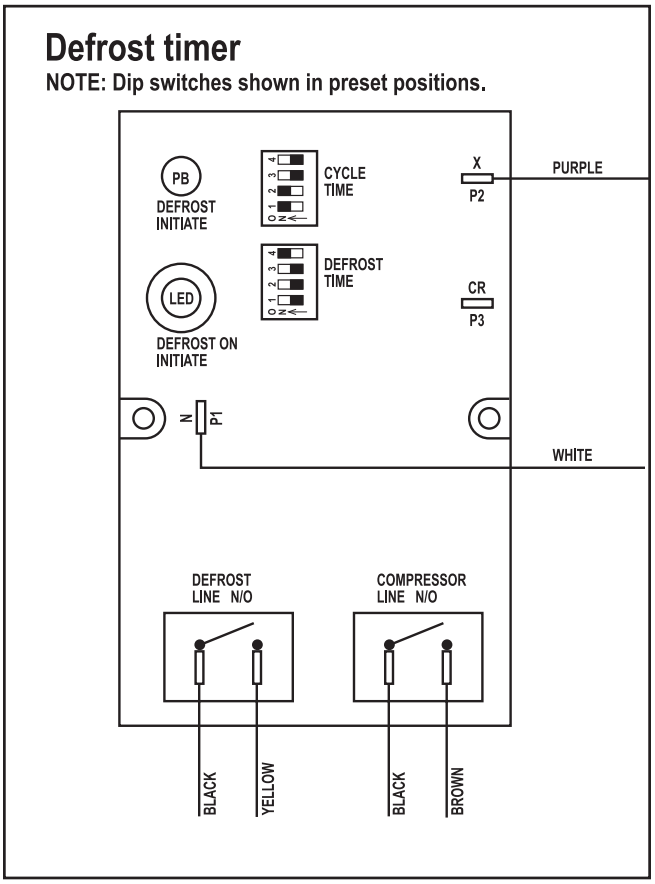


Figure 10. Defrost Timer

STANDARD LABOR GUIDELINES TO REPAIR OR REPLACE PARTS ON DELFIELD EQUIPMENT

Advice and recommendations given by Delfield Service Technicians do not constitute or guarantee any special coverage.

A maximum of 1-hour is allowed to **diagnose a defective component.**

A maximum of 1-hour is allowed for **retrieval of parts** not in stock.

A maximum **travel distance** of 100 miles round trip and 2-hours will be reimbursed.

Overtime, installation/start-up, normal control adjustments, general maintenance, glass breakage, freight damage, and/or correcting and end-user installation error will not be reimbursed under warranty unless pre-approved with a **Service Work Authorization** from Delfield. You must submit the number with the service claim.

LABOR OF 1-HOUR IS ALLOWED TO REPLACE:

• Thermostat	• Contactor/Relay
• Door Jamb Switch	• Transformer
• Solenoid Coil	• Evaporator/Condenser Fan Motor and Blade
• Hi-limit/Thermal Protector Switch	• Circulating Fan Motor and Blade
• Fan Delay/Defrost Termination Switch	• Microprocessor Control
• Compressor Start Components and Overload Protector	• Door Hinges, Locks, and Gaskets
• Defrost Timer	• Condensate Element
• Thermometer	

LABOR OF 2 HOURS IS ALLOWED TO REPLACE:

• Drawer Tracks/Cartridges	• Defrost Element
• Pressure Control	• Heating Element
• Solenoid Valve	• Locate/Repair a Lak

LABOR OF 3 HOURS IS ALLOWED TO REPLACE:

• EPR or CPR Valve	• Condenser or Evaporator Coil
• Expansion Valve	

LABOR OF 4 HOURS IS ALLOWED TO REPLACE

Compressor

This includes recovery of refrigerant and leak check.

$55.00 maximum reimbursement for refrigerant recovery (includes recovery machine, pump, torch, oil, flux, minor fittings, solder, brazing rod, nitrogen, or similar fees.)

REFRIGERANTS

R404A
A maximum of $12.00/lb. or 75¢/oz. will be reimbursed.

STANDARD TWO YEAR WARRANTY (Two year parts and labor, five year compressor)

The Delfield Company ("Delfield") warrants to the Original Purchaser of the Delfield product (herein called the "Unit") that such Unit, and all parts thereof, will be free from defects in material and workmanship under normal use and service for a period of two (2) years from the date of shipment of the Unit to the Original Purchaser **or, if the Original Purchaser returns the warranty card completely filled out including the date of installation within thirty (30) days of receipt of the Unit, two (2) years from the date of installation.** During this two year warranty period, Delfield will repair or replace any defective part or portion there of returned to Delfield by the Original Purchaser which Delfield determines was defective due to faulty material or workmanship. The Original purchaser will pay all labor, crating, freight and related costs incurred in the removal of the Unit of defective component and shipment to Delfield, except that during a period of either ninety (90) days from the date of shipment of the Unit to the Original Purchaser or, if the Original Purchaser returns the warranty card completely filled out including the date of installation within thirty (30) days of receipt of the Unit, ninety (90) days from the date of installation Delfield will pay all related labor costs. Delfield will pay the return costs if the Unit or part thereof was defective.

The term "Original Purchaser" as used herein means that person, firm, association, or corporation for whom the Unit was originally installed.

This warranty does not apply to any Unit or part thereof that has been subjected to misuse, neglect, alteration, or accident, such as accidental damage to the exterior finish, operated contrary to the recommendations specified by Delfield; or repaired or altered by anyone other than Delfield in any way so as to, in Delfield's sole judgment, affect its quality or efficiency. This warranty does not apply to any Unit that has been moved from the location where it was originally installed. This warranty also does not cover the refrigerator drier or the light bulbs used in the Unit. **The warranty is subject to the user's normal maintenance and care responsibility as set forth in the Service and Installation Manual, such as cleaning the condenser coil, and is in lieu of all other obligations of Delfield. Delfield neither assumes, nor authorizes any other person to assume for Delfield, any other liability in connection with Delfield's products.**

Removal or defacement of the original Serial Number or Model Number from any Unit shall be deemed to release Delfield from all obligations hereunder or any other obligations, express or implied.

Parts furnished by suppliers to Delfield are guaranteed by Delfield only to the extent of the original manufacturer's express warranty to Delfield. Failure of the Original Purchaser to receive such manufacturer's express warranty to Delfield. Failure of the Original Purchaser to receive such manufacturers warranty shall in no way create any warranty, expressed or implied, or any other obligation or liability on Delfield's part in respect thereof.

IF THE CUSTOMER IS USING A PART THAT RESULTS IN A VOIDED WARRANTY AND A DELFIELD AUTHORIZED REPRESENTATIVE TRAVELS TO THE INSTALLATION ADDRESS TO PERFORM WARRANTY SERVICE, THE SERVICE REPRESENTATIVE WILL ADVISE CUSTOMER THE WARRANTY IS VOID. SUCH SERVICE CALLS WILL BE BILLED TO CUSTOMER AT THE AUTHORIZED SERVICE CENTER'S THEN APPLICABLE TIME AND MATERIALS RATES. CONSIDER: CUSTOMER MAY INITIATE A SERVICE AGREEMENT WITHOUT PARTS COVERAGE.

Under no condition does this warranty give the Original Purchaser the right to replace the defective Unit with a complete Unit of the same manufacturer or of another make. Unless authorized by Delfield in writing, this warranty does not permit the replacement of any part, including the motor-compressor, to be made with the part of another make or manufacturer.

If shipment of a replacement part is requested prior to the arrival in the Delfield factory of the part claimed to be defective, the Original Purchaser must accept delivery of the replacement part of a C.O.D. basis, with credit being issued after the part has been received and inspected at Delfield's plant and determined by Delfield to be within this warranty.

No claims can be made under this warranty for spoilage of any products for any reason, including system failure.

The installation contractor shall be responsible for building access, entrance and field conditions to insure sufficient clearance to allow any hood(s), vent(s), or Unit(s) if necessary, to be brought into the building. Delfield will not be responsible for structural changes or damages incurred during installation of the Unit or any exhaust system.

Delfield shall not be liable in any manner for any default or delay in performance hereunder caused by or resulting from any contingency beyond Delfield's control, including, but not limited to, war, governmental restrictions or restraints, strike, lockouts, injunctions, fire, flood, acts of nature, short or reduced supply of raw materials, or discontinuance of the parts by the original part manufacturer.

The Service Labor Contract, if applicable, the foregoing is exclusive and in lieu of all other warranties, whether written or oral, express or implied. This warranty supersedes and excludes any prior oral or written representations or warranties. Delfield expressly disclaims any implied warranties of merchantability, fitness for a particular purpose of compliance with any law, treaty, rule or regulation relating to the discharge of substances into the environment. The sole and exclusive remedies of any person relating to the Unit, and the full liability of Delfield for any breach of this warranty, will be as provided in this warranty.

Other than this Delfield Standard Two Year Limited Warranty, any applicable Delfield Additional Three Year Protection Plan or applicable Delfield Service Labor Contract, the Original Purchaser agrees and acknowledges that no other warranties are offered or provided in connection with or for the unit or any other part thereof.

In no event will Delfield be liable for special, incidental or consequential damages, or for damages in the nature of penalties.

IF DURING THE WARRANTY PERIOD, CUSTOMER USES A PART FOR THIS DELFIELD EQUIPMENT OTHER THAN AN UNMODIFIED NEW OR RECYCLED PART PURCHASED DIRECTLY FROM DELFIELD OR ANY OF ITS AUTHORIZED SERVICE CENTERS AND/OR THE PART BEING USED IS MODIFIED FROM ITS ORIGINAL CONFIGURATION, THIS WARRANTY WILL BE VOID. FURTHER, DELFIELD AND ITS AFFILIATES WILL NOT BE LIABLE FOR ANY CLAIMS DAMAGES OR EXPENSES INCURRED BY THE CUSTOMER WHICH ARISE DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, DUE TO THE INSTALLATION OF ANY MODIFIED PART AND/OR PART RECEIVED FROM AN UNAUTHORIZED SERVICE CENTER. If the warranty becomes void, Customer may purchase from Delfield, if available, a Service Agreement or service at the then current time and materials rate.

For more information on Delfield warranty's log on and check out the service section of our web site at www.delfield.com.

Delfield

ADDITIONAL THREE YEAR PROTECTION PLAN (for motor-compressor only)

In addition to the Standard One Year Warranty on the MotorCompressor contained in the above listed Delfield product (the "Unit"), The Delfield Company ("Delfield") also agrees to repair, or exchange with similar or interchangeable parts in design and capacity at Delfield's option, the defective Motor-Compressor contained in the Unit (the "Motor-Compressor), or any part thereof, for the Original Purchaser only, at any time during the three (3) years following the initial two (2) year period commencing on the date of installation for the Original Purchaser. **Failure of the Original Purchaser to register the registration card containing the Original Purchasers name, address, date of installation, model number and serial number of the Unit containing the Motor-Compressor within 30 days from the date of installation shall void this warranty.** This additional warranty is only available if the Motor-Compressor is inoperative due to defects in material or factory workmanship, as determined by Delfield in its sole judgment and discretion.
The Original Purchaser shall be responsible for returning the defective Motor-Compressor to Delfield prepaid, F.O.B. at the address shown on the back cover of this manual.
The term "Original Purchaser" as used herein means that person, firm, association, or corporation for whom the Unit was originally installed.
The term "Motor-Compressor" as used herein does not include unit base, air or water cooled condenser, receiver, electrical accessories such as relay, capacitors, refrigerant controls, or condenser fan/motor assembly. This warranty does not cover labor charges incidental to the replacement of parts. This warranty further does not include any equipment to which said condensing unit is connected, such as cooling coils, temperature controls or refrigerant metering devices.
This warranty shall be void if the Motor-Compressor, in Delfield's sole judgement, has been subjected to misuse, neglect, alteration or accident, operated contrary to the recommendations specified by the Unit manufacturer, repaired or altered by anyone other than Delfield in any way so as, in Delfield's sole judgment, to affect its quality or efficiency or if the serial number has been altered, defaced or removed. This Warranty does not apply to a Motor-Compressor in any Unit that has been moved from the location where it was originally installed. The addition of methyl chloride to the condensing unit or refrigeration system shall void this warranty.

General Conditions
Delfield shall not be liable in any manner for any default or delay in performance hereunder caused by or resulting from any contingency beyond Delfield's control, including, but not limited to, war, governmental restrictions or restraints, strike, lockouts, injunctions, fire, flood, acts of nature, short or reduced supply of raw materials, or discontinuance of any part or the MotorCompressor by the unit manufacturer.
Replacement of a defective Motor-Compressor is limited to one (1) Motor-Compressor by us during the three (3) year period. Delfield shall replace the Motor-Compressor at no charge.
This warranty does not give the Original Purchaser of the MotorCompressor the right to purchase a complete replacement Motor-Compressor of the same make or of another make. It further does not permit the replacement to be made with a Motor-Compressor of another kind unless authorized by Delfield. In the event Delfield authorizes the Original Purchaser to purchase a replacement Motor-Compressor locally, only the wholesale cost of the Motor-Compressor is refundable.
Expressly excluded from this warranty are damages resulting from spoilage of goods.

Except as provided in any applicable Standard Two Year Limited Warranty or applicable Service Labor Contract, the foregoing is exclusive and in lieu of all other warranties, whether written or oral, express or implied. This Warranty supersedes and excludes any prior oral or written representations or warranties. Delfield expressly disclaims any implied warranties of merchantability, fitness for a particular purpose or compliance with any law, treaty, rule or regulation relating to the Motor-Compressor, and the full liability of Delfield for any breach of this warranty, will be as provided in this warranty.
Other than any applicable Delfield Standard Two year Limited Warranty, this Delfield Additional Three Year Protection Plan and any applicable Delfield Service Labor Contract, the Original Purchaser agrees and acknowledges that no other warranties are offered or provided in connection with or for the Motor-Compressor or any part thereof.
In no event will Delfield be liable for special, incidental or consequential damages, or for damages in the nature of penalties.

NOTES

Delfield

Mt. Pleasant, MI

Covington, TN

Thank you for choosing Delfield!

Help is a phone call away! Help our team of professional, courteous customer service reps by having your model number and serial number available at the time of your call (800) 733-8829.

Model: _____S/N: _____

Installation Date: _____

Enodis
STAR
CERTIFIED
SERVICE AND PARTS

For a list of Delfield's authorized parts depots, visit our website at www.delfield.com

Delfield

980 S. Isabella Rd., Mt. Pleasant, MI 48858, U.S.A. • (989) 773-7981 or (800) 733-8829 • Fax (989) 773-3210 • www.delfield.com
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